Shift EVSE Siting Framework – Draft Forecasted Needs

The Shift Plan can assist smarter EVSE planning by providing a siting framework. It is made up of two elements:

- A forecast range of charging need to bracket the magnitude of new infrastructure Sonoma County needs to reduce 50% of petroleum used in transportation by 2030.
- An online, GIS based map of "hot spots" in the community where EVs are most likely to be used: at home, at work, and for fast charging.

In order to meet this goal in Sonoma County, there would need to be nearly 90,000 electric vehicles in use by 2030. In order to support these electric vehicles, over 11,000 chargers could be needed at workplaces and public locations across the county.

While Sonoma County is currently on track to reach the goal for electric vehicles, the county is below the lower estimate for charging infrastructure needed to support those vehicles.

Figure 1 - Forecasted EV growth for Sonoma County

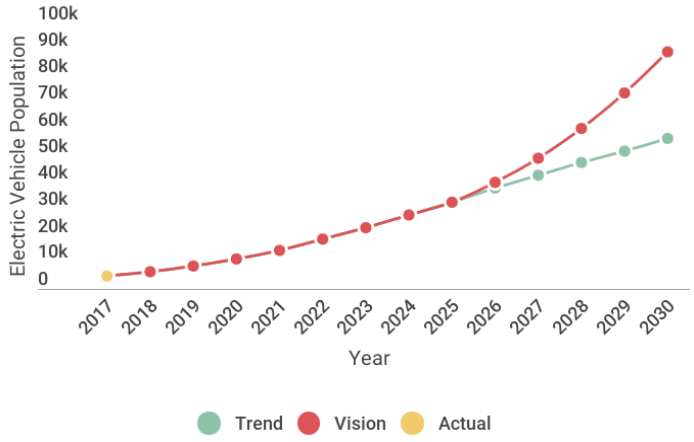
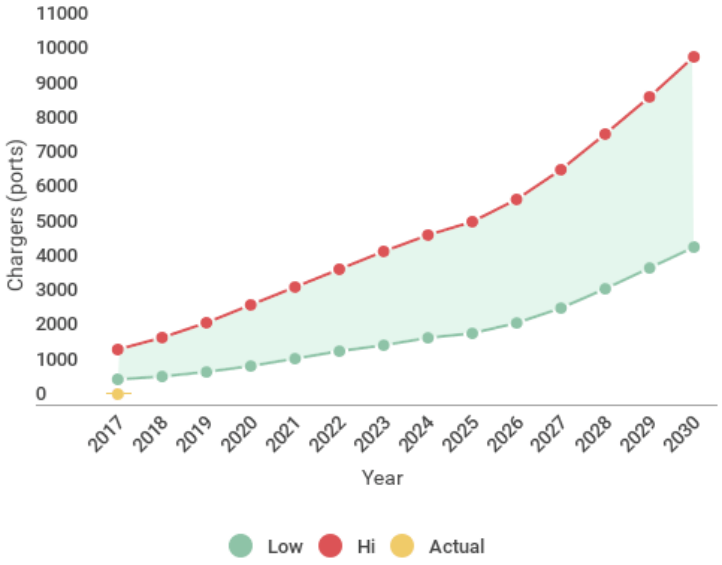


Figure 2 - Forecasted EVSE needs for Sonoma County (vision)



Charging Demand Forecasts

Forecasted EVSE needs by location (to achieve a 50% reduction in petroleum for transportation by 2030)

	2025	work / opportunity	2030	work / opportunity
Cloverdale	120	49 / 71	306	125 / 181
Coastal-Gualala	121	55 / 66	309	140 / 169
Cotati	66	49 / 17	167	123 / 44
Healdsburg	133	109 / 24	338	275 / 63
Rural Healdsburg	17	0 / 17	44	0 / 44
Petaluma	788	522 / 266	2010	1322 / 688
Rural Petaluma	11	0 / 11	29	0 / 29
Rohnert Park	541	356 / 185	1381	901 / 480
Rural North East	30	8 / 22	77	20 / 57
Russian River	73	45 / 28	185	115 / 70
Santa Rosa	1779	1164 / 615	4540	2951 / 1589
Rural Santa Rosa	325	219 / 106	828	555 / 273
Sebastopol	139	96 / 43	353	242 / 111
Rural Sebastopol	54	0 / 54	138	0 / 138
Sonoma	116	84 / 32	296	214 / 82
Rural Sonoma Valley	177	70 / 107	451	178 / 273
Windsor	118	111 / 7	300	280 / 20

Hot Spot Mapping

The EVSE Siting Framework is driven by a model forecasting the likelihood that electric vehicles will travel to a particular area. The model uses a combination of socioeconomic indicators and the Sonoma County travel model. The key socioeconomic indicators used are: income, hybrid ownership, property ownership, and housing type.

The Sonoma County Travel Model was used to indicate the number of trips from an origin to a destination. The trip types include home-based work, home-based other, and non home-based trips. The model shows the potential for different types of charging: residential, workplace, multi-family, and opportunity. While most types of charging are expected to be Level 2, opportunity charging also breaks out forecasted needs for DC fast charging.